

Appendix B

Supportive Information Requested in Items 4 through 14 of NRH FORM 5

For the convenience of applicants and for streamline handling of portable gauge applications this appendix should be used to provide supporting information. It is attached to Form NRH – 5.

Please refer to “Regulatory Guide 3.4, "Guidance for Radioactive Material - Portable Gauge and X-ray Fluorescence Analyzers") for more detail concerning each item and other options available.

- Complete item 1 thru 3 and 15 on NRH-5. Use this Appendix B to complete items 4-14. Please indicate the following on the NRH-5 **“See attachment for items 4-14”**.
- Please check the appropriate box(es) below and submit a detailed description of all the requested information. For additional information begin each item on a separate sheet, identifying the item number and the date of the application on each page.

Item #4 & 5

ITEM NO. AND TITLE	RESPONSE	YES (need to check one item per box)	ATTACHMENTS AND/OR ALTERNATIVE PROCEDURES ATTACHED (If item to left is checked then check and attach item requested in this column.)
4. Individual User(s)	“The radiation safety officer will maintain documentation of training for authorized users and his/her approval of the authorized user.”	[]	
5. Radiation Safety Officer (RSO)	Radiation Safety Officer. Name _____ Telephone # _____	[]	
	“The documentation for the training of the RSO are attached.”	[]	[] Training Records of RSO
	“The RSO will perform the duties and responsibilities of a RSO per Appendix E of Regulatory Guide 3.4, 'Radioactive Material –Guidance for Portable Gauges and X-ray Fluorescence Analyzers.’ Or “Will provide alternate list of duties and responsibilities of the RSO per the criteria of Appendix E.”	[] Or [] and	[] Alternate List of duties and responsibilities of the RSO

ITEM NO. AND TITLE	RESPONSE	YES (need to check one item per box)	ATTACHMENTS AND/OR ALTERNATIVE PROCEDURES ATTACHED (If item to left is checked then check and attach item requested in this column.)
6. Radioactive Material	List each radioisotope that will be used in the gauge or XRF	Complete item 6 below []	
6.a. Element and Mass Number			
6b. Chemical and/or physical form	Identify the manufacturer and model number of each sealed source that will be used in the gauge or XRF.		
6c. Maximum amount to be one possessed at any time	Complete for each radioactive material requested. Indicate maximum activity per source Specify the purpose for the use of the gauging device.		
6d. Authorized use AND Manufacturer and model number of the gauging device	AND Identify the manufacturer and model number of the gauging device in which the sealed sources will be used.		

Please enter the necessary information for item 6 below. If you need additional space please add an attachment

<u>6.a. Element and Mass Number</u>	<u>6.b. Chemical or Physical Form (Make and Model if sealed source)</u>	<u>6.c. Maximum Activity Requested (Expressed as Curies, Millicuries or Microcuries)</u>	<u>6.d. Use of Each Form (If sealed source, also give Make and Model Number of the storage and/or device in which sealed source will be stored and/or used)</u>

7. Training of Individuals in Item 4. And 5.	<p>“Authorized users and the radiation safety officer will demonstrate competency in use, maintenance and transfer of the device(s) by satisfactory completion of an eight(8) hour course</p>	<input type="checkbox"/>	<input type="checkbox"/> Course for Agency approval
8. Experience with Radiation of Individuals in Item 4. And 5.	<p>-provided by the manufacturer of the gauge</p> <p>Or</p> <p>-agency approved course.”</p> <p>Note: See Appendix I for course criteria</p> <p>Note: The licensee will need to maintain training records on file for each authorized user and will maintain records showing the approval by the RSO of the authorized users. This will be reviewed at the time of inspection. See Appendix S for a sample record retention schedule.</p>		
9. Radiation Detection Instruments	<p>"We will possess and use a radiation survey meter that meets the criteria in the section entitled 'Radiation Detection Instruments' in Regulatory Guide 3.4, 'Radioactive Material –Guidance for Portable Gauges and X-ray Fluorescence Analyzers' in the event of an incident “</p> <p>Or</p> <p>“We have access to a radiation survey meter that meets the criteria in the section entitled 'Radiation Detection Instruments' in Regulatory Guide 3.4, 'Radioactive Material –Guidance for Portable Gauges and X-ray Fluorescence Analyzers' in the event of an incident ”</p>	<input type="checkbox"/>	<input type="checkbox"/> A plan of how an instrument will be obtained.
10. Calibration of Instruments Listed in Item 10 a. Calibrated by Service Company	<p>“We will possess a survey meter and will have the instrument calibrated annually. The calibration service company’s, name, address, license number and the state or federal agency that issued the company’s license is provided below.”</p> <p>Name _____</p> <p>Address _____</p> <p>_____</p> <p>_____</p> <p>License number _____</p> <p>Issuing Agency _____</p>		
10 b. Calibrated by Applicant	<p>Or</p> <p>“We will calibrate the survey instruments in-house annually. We have submit detailed information describing the facilities, equipment, personnel, and procedures to be used to perform the calibrations.”</p> <p>Note: Contact the Agency for criteria for in house calibrations.</p> <p>Or</p> <p>NA if you plan to access a survey meter.</p>	<p>Or</p> <input type="checkbox"/> and	<input type="checkbox"/> In house calibration procedure for Agency approval.
		<p>Or</p> <input type="checkbox"/>	

11 Personnel Monitoring Devices	<p>“We will provide dosimetry processed and evaluated by a NVLAP approved processor that is exchanged at a frequency recommended by the processor.”</p> <p>“We will be using the following type: <input type="checkbox"/> Film Badge <input type="checkbox"/> TLD <input type="checkbox"/> OSL <input type="checkbox"/> Other (Specify) _____</p> <p>The supplier is: _____</p> <p>The exchange frequency is: <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Other (Specify) _____”</p> <p>Or</p> <p>“We will maintain, for inspection by the Agency, documentation demonstrating that unmonitored individuals are not likely to receive, in one year, a radiation dose in excess of 10 percent of the allowable limits of 180 NAC 4”</p> <p>Note: See Appendix K for guidance on demonstrating that unmonitored individuals are not likely to exceed 10 percent of the allowable limits.</p>	<p>[]</p> <p>Or</p> <p>[]</p>	
12. Facilities and Equipment	<p>“A diagram of the permanent gauge storage facility is attached.”</p> <p>Note: The diagram identifies all entrances and points of access, rooms, uses of the room, the location of the gauge storage area, and its distance from occupied work area. See Appendix K for an example diagram and a form</p> <p>“We will store the device(s) in a locked enclosure such as the transport vehicle, store room closet, shed, etc., in a way that will prevent access by unauthorized persons.”</p>	<p>[]</p> <p>[]</p>	
13. Radiation Protection Program 13.a. Operating and Emergency Procedures	<p>“We have implemented and will maintain operating and emergency procedures in Appendix F Regulatory Guide 3.4 “Radioactive Material Guidance for Portable Gauges and X-ray Fluorescence Analyzers.” “Copies of these procedures will be provided to all authorized users and at each job site.”</p> <p>(A copy of these Operating and Emergency Procedures will be copied from Regulatory Guide 3.4. The information to individualize the procedure will be completed.)</p> <p>Or</p> <p>“We have implemented and will maintain operating and emergency procedures submitted with this application. They meet the criteria of section titled Radiation Protection Program – Operating and Emergency Procedures in Regulatory Guide 3.4 “Radioactive Material Guidance for Portable Gauges and X-ray Fluorescence Analyzers.”. Copies of these procedures will be provided to all authorized users and at each job site.”</p>	<p>[]</p> <p>Or</p> <p>[] and</p>	<p>[] In house operating and emergency procedures for agency approval.</p>

13. Radiation Protection Program 13f. Material Receipt and Accountability	<p>"Physical inventories will be conducted at intervals not to exceed 6 months, to account for all sealed sources and devices received and possessed under the license."</p> <p>Note: See Appendix Q for a inventory procedures, Appendix R for inventory form and Appendix P for a utilization log.</p> <p>These items will be reviewed during an inspection.</p> <p>Or</p> <p>A description of the frequency and procedures for ensuring that no gauge has been lost, stolen, or misplaced and that, if the licensee possesses gauges exceeding threshold amounts, the licensee complies with financial assurance requirements in 180 NAC4-018.</p>	<input type="checkbox"/>	Or <input type="checkbox"/>	
13. Radiation Protection Program 13g. Public Dose	<p>"We will maintain documentation (calculations and/or measurements) to show that any member of the public does not exceed a radiation dose of 100 mrem per year and do not exceed 2 mrem in any one hour in an unrestricted area."</p>	Need Not be Submitted with Application.		
14. Waste Disposal	<p>"Disposal will be by transfer of the radioactive material to a licensee specifically authorized to possess it in accordance with Appendix T."</p> <p>Note: Due to difficulties and costs associated with disposal of Am-241 sealed neutron sources, applicants should preplan the disposal</p>	<input type="checkbox"/>		
15. Certification	<p>Signed by management representative authorized to make binding commitments.</p>	Item 15 needs to be signed on NRH-5.		
Termination of Activities	<p>The applicant is not required to submit a response to the termination of activities during the initial application. However when the license expires when the licensee ceases operation, NRH 60 "Certification of Disposition of Materials" must be submitted.</p>	Need Not be Submitted with Application.		